

ABSTRACT

An N-port signal divider/combiner for dividing and/or combining signals in N-1 frequency bands, including a common line; and N-1 signal ports each coupled to the common line by a respective transmission line, each transmission line having one or more stubs extending from the transmission line, each stub having a length selected so that the stub acts as a notch filter at a respective rejection wavelength, wherein at least one of the stubs is a short-circuit stub, and at least one of the stubs is an open-circuit stub. A first one of the stubs has a length $n\lambda_1/4$ selected so that the stub acts as a notch filter at a first rejection wavelength λ_1 , a second one of the stubs has a length $m\lambda_2/4$ selected so that the stub acts as a notch filter at a second rejection wavelength λ_2 , and n and m are different integers.